



JOINT WARFARE SYSTEM (JWARS) WARGAMING REQUIREMENTS

Joint Staff/J-8

31-Mar-97

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Slide 1

JOINT MODELING & SIMULATION REQUIREMENTS GROUP (JM&SRG)



- **Charter**
 - Define theater-level modeling and analysis requirements
 - Manage future requirements for JWARS
 - Recommend requirements to steering committee
- **Membership**
 - CINCs (all)
 - Joint Staff (all directorates)
 - Services (all)
 - OSD (PA&E, S&R, CISA, BMDO)
 - Others (e.g., DIA)



ADDITIONAL INVITED ATTENDEES

- **DMSO**
- **DMSO M&S Executive Agents for Terrain, Ocean, Air & Space**
- **Joint Warfare Analysis Center**
- **Naval Postgraduate School**
- **Office of the Space Architect**
- **OUSD (Advanced Technology)**
- **OUSD (Counterproliferation)**

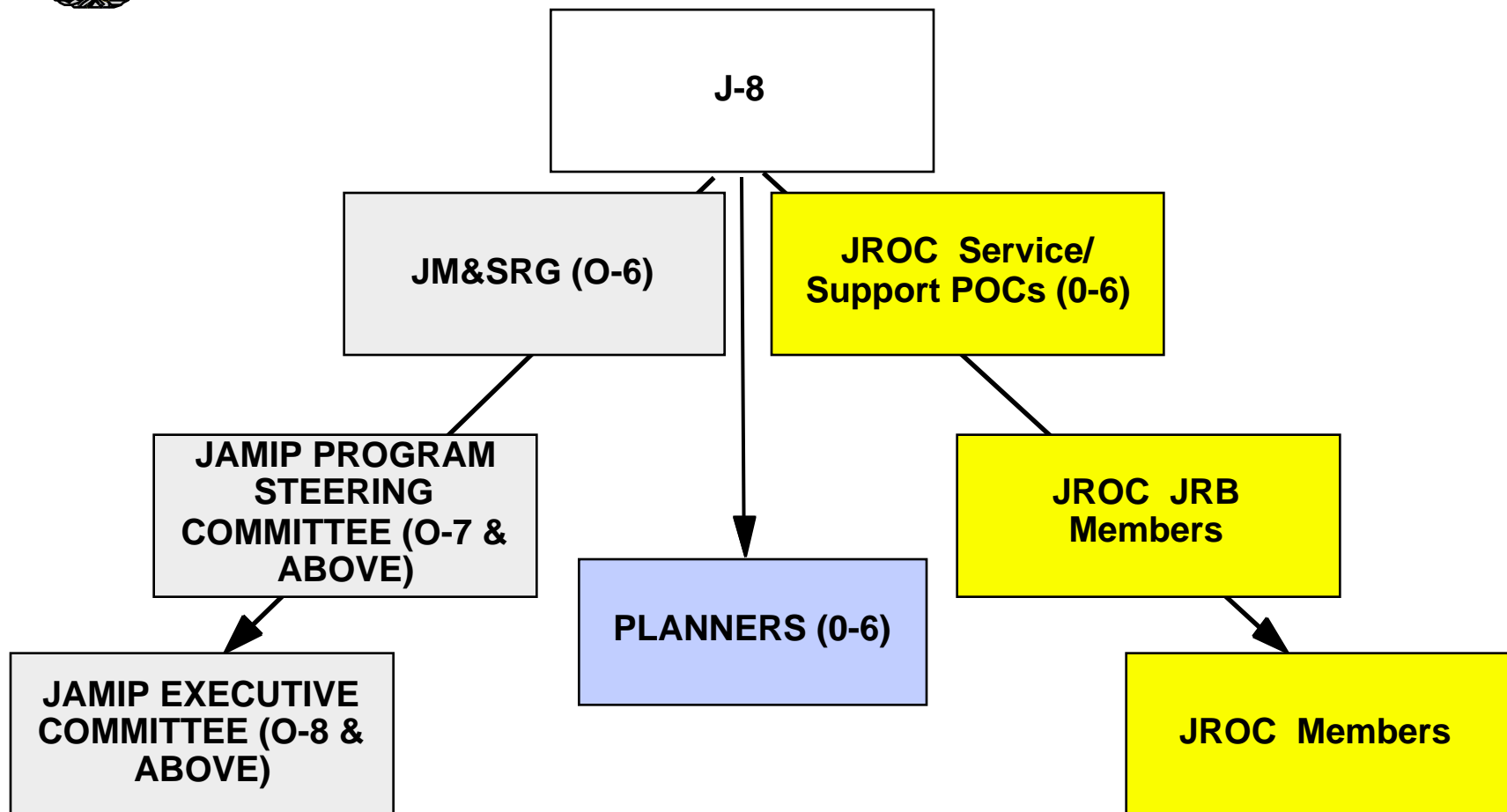
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OVERSIGHT?

No attendees invited from wargaming community

APPROVAL, DEVELOPMENT, AND COORDINATION PROCESS

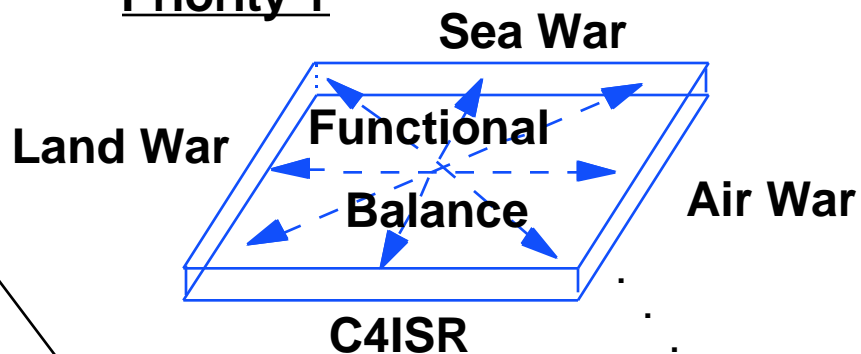


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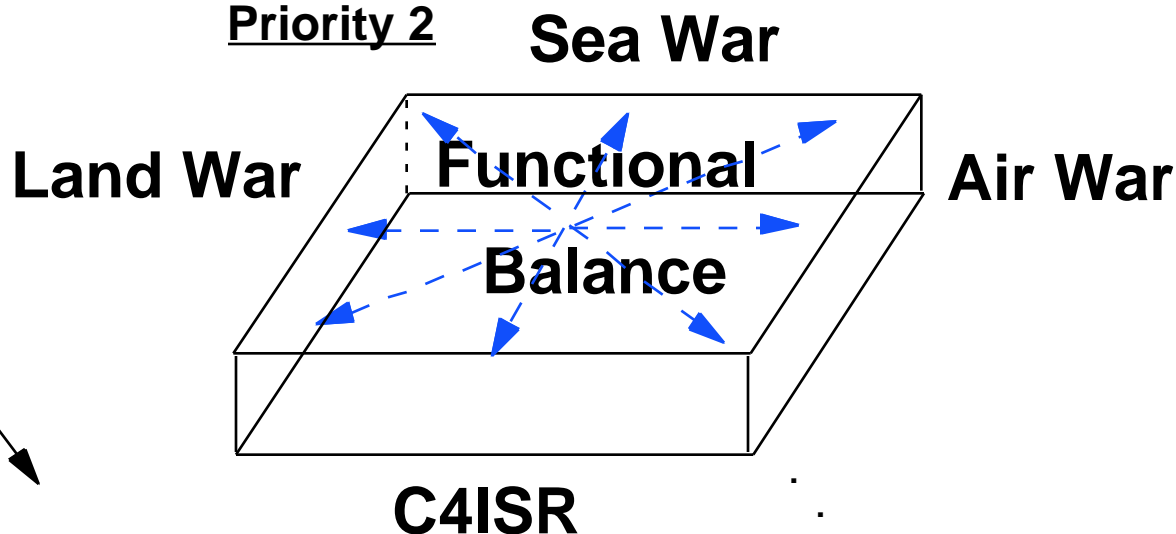
CONCEPT FOR SUCCESSIVE VERSIONS OF REQUIREMENTS



Priority 1



Priority 2



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PRINCIPLES

- **Critical functions must be represented and the various joint warfare functions are to be balanced**
- **C4ISR linkage to warfight is overarching**
- **Theater level is focus of analysis**
- **Requirements are intended to satisfy all users and uses, by phase of development**

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APPROACH

- **Describe functionality**
 - Fishbone charts
 - Functions matrix
- **Identify objects**
 - Object resolution (prioritized)
 - Object characteristics
- **Identify interactions between objects**
 - C4ISR Same-side matrix
 - Logistics Same-side matrix
 - Combat/IW/EW Opposing-side matrix

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JOINT THEATER OPERATIONS FUNCTIONS



1st
Priority

2nd
Priority

3rd
Priority

Air Defense
Air Escort
Air Superiority
Airborne/Helo Operations
Amphibious Operations
AOA Defense
CAS
Checkpoint Defense
Checkpoint Interdiction
Coastal Defense
Combat Engineer Operations
Fire Support (Suppress, Destroy,
Neutralize, & Obscure)
Ground Defense

E
E
E
E
E
E
E
E
E
E
E
E
E

E--Explicit
I--Implicit

JOINT THEATER OPERATIONS FUNCTIONS (Cont.)



1st
Priority 2nd
Priority 3rd
Priority

Interdiction

E

Maneuver (Attack, Defend, & Move)

E

Missile Defense (Ballistic/Cruise)

E

MIW/MCM

E

Search and Rescue

I

Sea Control

E

SEAD

E

SLOC Defense

E

**Space (Control, Force Application,
Force Enhancement, Support, &
Attack)**

I

E

Strategic Attack

E

E--Explicit
I--Implicit

JOINT THEATER OPERATIONS OBJECTS



1st
Priority

2nd
Priority

3rd
Priority

Air Combat Unit

**Air Msn Element/
Msl Attack**

**Aircraft/
Msl**

Air Defense Unit

Air Defense Bn

**Air Def
Site/Btry**

**Air Def
Wpn/
Sensors**

Air Support Unit

**Spt Air Msn
Element**

Aircraft

Airbase/Port

Airbase/Port

Facilities

**Detailed
facs**

**Airbase/Port Support
Unit**

**Airbase/Port Spt
Unit**

Attack Helicopter Unit

Attack Helo Bn

**Attack
Helo**

JOINT THEATER OPERATIONS OBJECTS (Cont.)



1st Priority

C² Units **DIV/ACE/Wing/CAG HQ,
Corps/TG/MEF HQ,
Army/TF/MAGTF HQ,
Component CMD HQ, JTF
HQ/JSOTF HQ, CINC
HQ/NCA**

2nd Priority

**Add: Bde/Rgt
HQ, TU, Air
Sqdn**

3rd Priority

**Add: Bn HQ,
TE, MSN or
A/C CDR**

JOINT THEATER OPERATIONS OBJECTS (Cont.)



1st
Priority

2nd
Priority

3rd
Priority

**Civilian
Center/Facility
Combat Support
Unit
Ground Combat
Unit
Sea Combat Unit**

**Aggregate Center/
Facs
EAD Cmbt Spt
Bde
Bde/RLT/Rgt/MEU
Ship/Sub**

**Bn

Bn

Landing
craft/
Boats**

**Detailed
center/facs
Co

Co

Co**

**Service Support
Unit
Support Ship**

**EAD Svc Spt
Bde/Grp
Spt Ship**

Bn

*** Individual marine/soldier added as a 4th priority**



PROCESS REQUIREMENTS POTENTIALLY USEFUL TO WARGAMING COMMUNITY

- **Run control: JWARS will include the following capabilities:**
 - **With minimal burden, interrupt JWARS, redefine data, and restart execution at the point where execution left off**
 - **Provide a rolling checkpoint that allows periodic capture of “state of the model” at user-defined intervals or object state values and subsequent restart at any of these points**

PROCESS REQUIREMENTS POTENTIALLY USEFUL TO WARGAMING COMMUNITY (Cont.)



- **Display/User interface**
 - Menu-driven user interface
 - Map-based GUI
- **Portability:** Use of lap-top and notebook computers for low-resolution analysis as a goal
- **Preprocessing:** User standard terminology
- **Postprocessing:** Graphical, text, and spreadsheet displays exportable to standard software packages



BACKUP



USERS AND USES OF JWARS

JS: FORCE SUFFICIENCY

JWCAs:

- ISSUE DEV.
- JOINT CAPABILITY TRADEOFFS

JWARS

SVCs:

- SYSTEM-LEVEL TRADEOFFS
- COEAS

CINCS: OPLAN AOAs

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JWARS REQUIREMENTS APPROVAL CHRONOLOGY



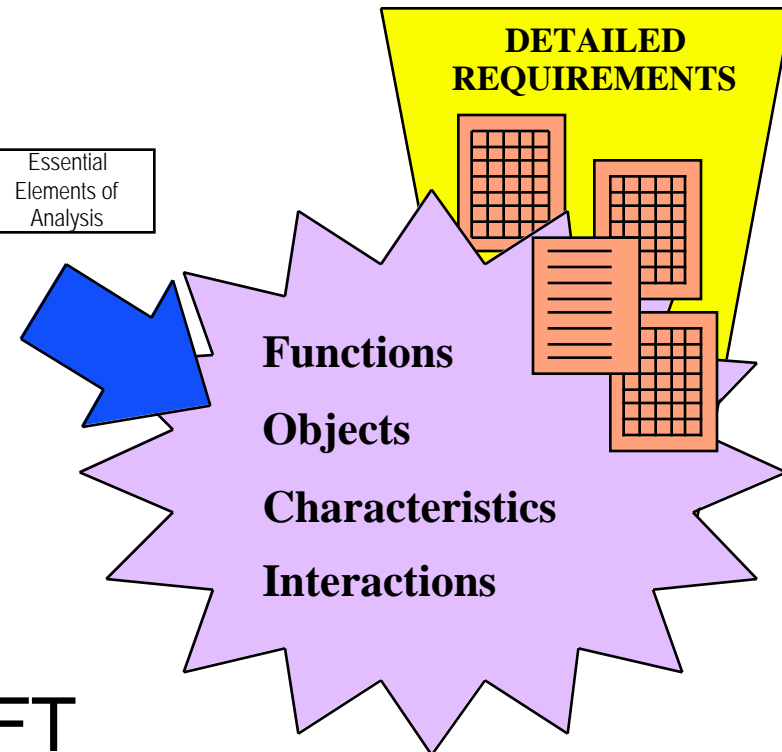
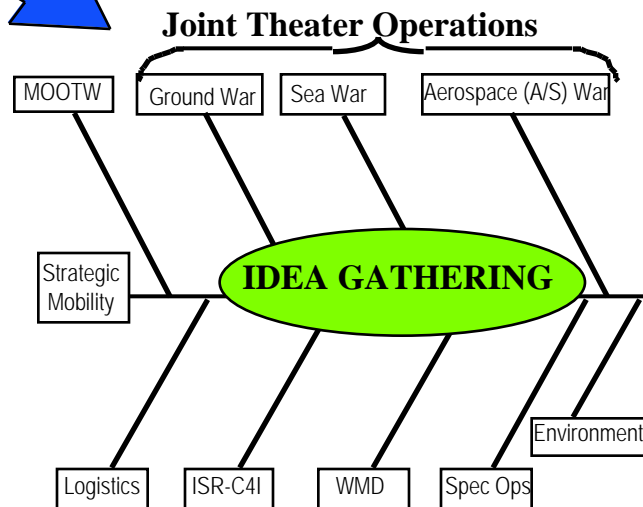
ACTIVITY	DATE
JM&SRG-derived initial requirements	Aug 95
Member level (0-6) approval of draft	Sep 95
JAMIP Steering Cmte approval of draft	Dec 95
Briefing on process and content to JROC	Jan 96
JAMIP Executive Cmte approval of draft	Feb 96
Planners' level coordination	Apr 96
JROC tasking to assess req'ts process	May 96
VCJCS approval of requirements process	Sep 96
Development of draft ORD for MOP-77 staffing	Dec 96
Coordination of comments	Mar 97

DEVELOPMENT PROCESS



- Known Theater Model Requirements
- Doctrine
- Technology

Ishikawa Diagrams (“Fishbone” Charts)



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